Inspiron 7590

Setup and Specifications

Notes, cautions, and warnings

(i) **NOTE: A NOTE indicates important information that helps you make better use of your product.**

⚠ **CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.**

⚠ **WARNING: A WARNING indicates a potential for property damage, personal injury, or death.**

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Contents

Set up your Inspiron 7590

ⓘ **NOTE: The images in this document may differ from your computer depending on the configuration you ordered.**

1. Connect the power adapter and press the power button.

ⓘ **NOTE: To conserve battery power, the battery might enter power saving mode. Connect the power adapter and press the power button to turn on the computer.**

ⓘ **NOTE: After the computer is turned on for the first time and the operating system setup is complete, it can be subsequently turned on by opening the display from the closed position.**

2. Finish operating system setup.

   For Ubuntu:

   Follow the on-screen instructions to complete the setup. For more information about installing and configuring Ubuntu, see the knowledge base articles SLN151664 and SLN151748 at www.dell.com/support.

   For Windows:

   Follow the on-screen instructions to complete the setup. When setting up, Dell recommends that you:

   - Connect to a network for Windows updates.

     ⓘ **NOTE: If connecting to a secured wireless network, enter the password for the wireless network access when prompted.**

   - If connected to the internet, sign-in with or create a Microsoft account. If not connected to the internet, create an offline account.
   - On the **Support and Protection** screen, enter your contact details.

3. Locate and use Dell apps from the Windows Start menu—Recommended

Table 1. Locate Dell apps

Resources	Description
	My Dell Centralized location for key Dell applications, help articles, and other important information about your computer. It also notifies you about the warranty status, recommended accessories, and software updates if available.

Resources	Description
	SupportAssist Pro-actively checks the health of your computer's hardware and software. The SupportAssist OS Recovery tool troubleshoots issues with the operating system. For more information, see the SupportAssist documentation at www.dell.com/support. ⓘ **NOTE: In SupportAssist, click the warranty expiry date to renew or upgrade your warranty.**
	Dell Update Updates your computer with critical fixes and latest device drivers as they become available. For more information about using Dell Update, see the knowledge base article SLN305843 at www.dell.com/support.
	Dell Digital Delivery Download software applications, which are purchased but not pre-installed on your computer. For more information about using Dell Digital Delivery, see the knowledge base article 153764 at www.dell.com/support.

Views of Inspiron 7590

Right

1. **microSD-card slot**

   Reads from and writes to the microSD-card.
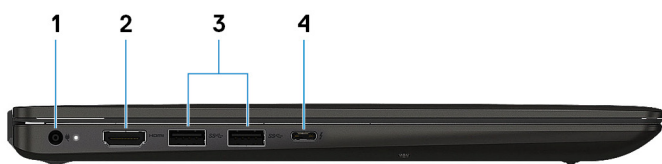2. **USB 3.1 Gen 1 port**

   Connect peripherals such as external storage devices and printers. Provides data transfer speeds up to 5 Gbps.
3. **Headset port**

   Connect headphones or a headset (headphone and microphone combo).

Left

1. **Power-adapter port**

   Connect a power adapter to provide power to your computer.
2. **HDMI port**

   Connect to a TV or another HDMI-in enabled device. Provides video and audio output.
3. **USB 3.1 Gen 1 ports (2)**

   Connect peripherals such as external storage devices and printers. Provides data transfer speeds up to 5 Gbps.
4. **Thunderbolt 3 (USB Type-C) port**

   Supports USB 3.1 Gen 2, DisplayPort 1.2, Thunderbolt 3 and also enables you to connect to an external display using a display adapter.

   Provides data transfer rates up to 10 Gbps for USB 3.1 Gen 2 and up to 40 Gbps for Thunderbolt 3.

Base

1. **Left-click area**

   Press to left-click.

2. **Touchpad**

   Move your finger on the touchpad to move the mouse pointer. Tap to left-click and two finger tap to right-click.

3. **Right-click area**

   Press to right-click.

4. **Power button with optional fingerprint reader**

   Press to turn on the computer if it is turned off, in sleep state, or in hibernate state.

   When the computer is turned on, press the power button to put the computer into sleep state; press and hold the power button for 4 seconds to force shut-down the computer.

   If the power button has a fingerprint reader, place your finger on the power button to log in.

   ⓘ **NOTE: You can customize power-button behavior in Windows. For more information, see** *Me and My Dell* **at www.dell.com/support/manuals.**

Display
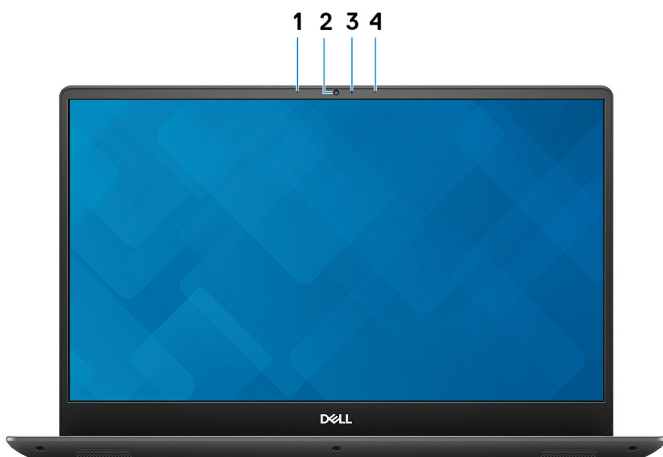
1. **Left microphone**

   Provides digital sound input for audio recording and voice calls.
2. **Camera**

   Enables you to video chat, capture photos, and record videos.
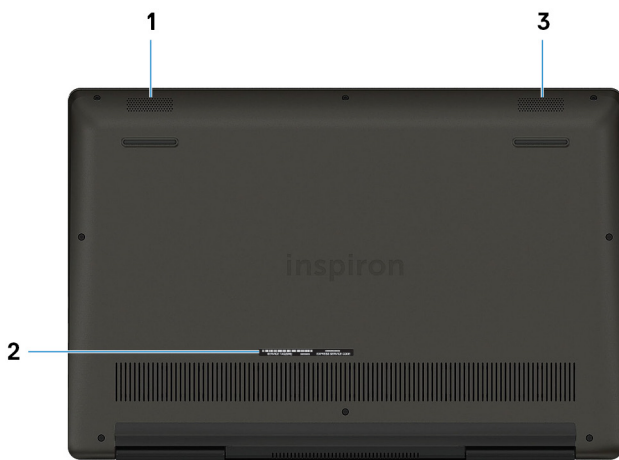3. **Camera-status light**

   Turns on when the camera is in use.
4. **Right microphone**

   Provides digital sound input for audio recording and voice calls.

Bottom

1. **Left speaker**

   Provides audio output.
2. **Service Tag label**

   The Service Tag is a unique alphanumeric identifier that enables Dell service technicians to identify the hardware components in your computer and access warranty information.
3. **Right speaker**

   Provides audio output.

Specifications of Inspiron 7590

Dimensions and weight

Table 2. Dimensions and weight

Description	Values
Height:	
Front	17.95 mm (0.71 in.)
Rear	19.9 mm (0.78 in.)
Width	357.6 mm (14.08 in.)
Depth	238.8 mm (9.4 in.)
Weight (maximum)	1.81 kg (3.99 lb)

ⓘ **NOTE: The weight of your computer depends on the configuration ordered and the manufacturing variability.**

Processors

Table 3. Processors

Description	Values		
Processors	9th Generation Intel Core i5-9300H	9th Generation Intel Core i7-9750H	9th Generation Intel Core i9-9880H
Wattage	45 W	45 W	45 W
Core count	4	6	8
Thread count	8	12	16
Speed	Up to 4.1 GHz	Up to 4.5 GHz	Up to 4.8 GHz
Cache	8 MB	12 MB	16 MB
Integrated graphics	Intel UHD 630 Graphics	Intel UHD 630 Graphics	Intel UHD 630 Graphics

Chipset

Table 4. Chipset

Description	Values
Chipset	Intel HM370
Processor	9th Generation Intel Core i5/i7/i9
DRAM bus width	64-bit
Flash EPROM	16 MB
PCIe bus	Up to Gen 3.0

Operating system

- Windows 10 Home (64-bit)
- Windows 10 Professional (64-bit)
- Ubuntu

Memory

Table 5. Memory specifications

Description	Values
Slots	Two-SODIMM slots
Type	Dual-channel DDR4
Speed	2666 MHz
Maximum memory	32 GB
Minimum memory	8 GB
Memory size per slot	8 GB, 12 GB, 16 GB, 32 GB
Configurations supported	• 8 GB DDR4 at 2666 MHz (1 x 8 GB) • 16 GB DDR4 at 2666 MHz (2 x 8 GB) • 16 GB DDR4 at 2666 MHz (1 x 16 GB) • 32 GB DDR4 at 2666 MHz (2 x 16 GB)

Ports and connectors

Table 6. External ports and connectors

External:

USB	• Three USB 3.1 Gen 1 ports • One Thunderbolt 3 (USB Type-C) port
Audio	One headset (headphone and microphone combo) port
Video	One HDMI 2.0 port
Media card reader	One microSD-card slot
Docking port	Not supported
Power adapter port	One 4.5 mm x 2.9 mm DC-in
Security	Not supported

Table 7. Internal ports and connectors

Internal:

M.2	• One M.2 2230 slot for WLAN • One M.2 2280/2230/2242 slot for Solid-State Drive (SSD)/Intel Optane • One M.2 2280 slot for PCIe SSD

(i) **NOTE: To learn more about the features of different types of M.2 cards, see the knowledge base article SLN301626.**

Communications

Wireless module

Table 8. Wireless module specifications

Description	Values	
Model number	Qualcomm QCA61x4A	Intel 9560
Transfer rate	Up to 867 Mbps	Up to 1730 Mbps
Frequency bands supported	2.4 GHz/5 GHz	2.4 GHz/5 GHz
Wireless standards	• Wi-Fi 802.11 a/b/g • Wi-Fi 4 (Wi-Fi 802.11n) • Wi-Fi 5 (Wi-Fi 802.11ac)	• Wi-Fi 802.11 a/b/g • Wi-Fi 4 (Wi-Fi 802.11n) • Wi-Fi 5 (Wi-Fi 802.11ac)
Encryption	• 64-bit/128-bit WEP	• 64-bit/128-bit WEP

Description	Values	
	• AES-CCMP • TKIP	• AES-CCMP • TKIP
Bluetooth	Bluetooth 4.2	Bluetooth 5

Audio

Table 9. Audio specifications

Description	Values
Controller	Realtek ALC3254
Stereo conversion	Supported
Internal interface	Intel HDA
External interface	Headset Combo Connector
Speakers	Two
Internal speaker amplifier	Supported (Audio codec built-in amplifier)
External volume controls	Keyboard shortcut controls
Speaker output:	
Average	2 W
Peak	2.5 W
Subwoofer output	Not supported
Microphone	Dual-array microphones

Storage

This section lists the storage options on your Inspiron 7590.

Your computer supports one of the following configurations:

• One M.2 2230/2280 Solid-State Drive (SSD)
• One M.2 2230/2280 Intel Optane storage

The primary drive of your computer varies with the storage configuration. For computers with a M.2 drive, the M.2 drive is the primary drive

Table 10. Storage specifications

Storage type	Interface type	Capacity
One M.2 2230/2280 solid-state drive	PCIe Gen 3.0 x4 NVMe + SATA3 AHCI, up to 32 Gbps	Up to 512 GB
One M.2 2230/2280 Intel Optane Storage	PCIe Gen 3.0 x4 NVMe, up to 32 Gbps	Up to 512 GB

Intel Optane memory (optional)

Intel Optane technology utilizes 3D XPoint memory technology and functions as a non-volatile storage cache/accelerator and/or storage device depending on the Intel Optane memory installed in your computer.

Your computer supports the following Intel Optane memory:

- Intel Optane Memory M15
- Intel Optane Memory H10 with solid-state storage

Intel Optane Memory M15

Intel Optane Memory M15 functions only as a non-volatile storage cache/accelerator, enabling enhanced read/write speeds for hard-drive storage. It neither replaces nor adds to the memory (RAM) installed on your computer.

Table 11. Intel Optane Memory M15 specifications

Description	Values
Interface	PCIe 3.0 x2
Connector	M.2
Form factor	2280
Capacity	32 GB or 64 GB

(i) **NOTE: Intel Optane Memory M15 is supported on computers that meet the following requirements:**

- **7th Generation or higher Intel Core i3/i5/i7 processors**
- **Windows 10 64-bit version or higher (Anniversary Update)**
- **Intel Rapid Storage Technology driver version 15.9.1.1018 or higher**

Intel Optane Memory H10 with solid-state storage

Intel Optane Memory H10 with solid-state storage functions as both a non-volatile storage cache/accelerator (enabling enhanced read/write speeds for hard-drive storage) and a solid-state storage solution. It neither replaces nor adds to the memory (RAM) installed on your computer.

Table 12. Intel Optane Memory H10 with solid-state storage specifications

Description	Values
Interface	PCIe 3.0 x4 • One PCIe 3.0 x2 for Optane memory • One PCIe 3.0 x2 for solid-state storage
Connector	M.2
Form factor	2280
Capacity (Optane memory)	Up to 32 GB
Capacity (solid-state storage)	Up to 512 GB

(i) **NOTE: Intel Optane Memory H10 with solid-state storage is supported on computers that meet the following requirements:**

- **9th Generation or higher Intel Core i3/i5/i7 processors**
- **Windows 10 64-bit version or higher (Anniversary Update)**

- **Intel Rapid Storage Technology driver version 15.9.1.1018 or higher**

Media-card reader

Table 13. Media-card reader specifications

Description	Values
Type	One SD card slot
Cards supported	Micro Secure Digital (mSD)

Keyboard

Table 14. Keyboard specifications

Description	Values
Type	Backlit keyboard
Layout	QWERTY
Number of keys	- United States and Canada: 101 keys - United Kingdom: 102 keys - Japan: 105 keys
Size	X=18.70 mm key pitch Y=18.05 mm key pitch
Shortcut keys	Some keys on your keyboard have two symbols on them. These keys can be used to type alternate characters or to perform secondary functions. To type the alternate character, press Shift and the desired key. To perform secondary functions, press Fn and the desired key. ⓘ **NOTE: You can define the primary behavior of the function keys (F1–F12) changing Function Key Behavior in BIOS setup program.** Keyboard shortcuts

Camera

Table 15. Camera specifications

Description	Values
Number of cameras	One
Type	RGB HD camera
Location	Front camera

Description	Values
Sensor type	CMOS sensor technology
Resolution:	
Still image	0.92 megapixels
Video	1280 x 720 (HD) at 30 frames per second
Diagonal viewing angle	74.9 degrees

Touchpad

Table 16. Touchpad specifications

Description	Values
Resolution:	
Horizontal	3211
Vertical	2431
Dimensions:	
Horizontal	105 mm (4 in.)
Vertical	80 mm (3 in.)

Touchpad gestures

For more information about touchpad gestures for Windows 10, see the Microsoft knowledge base article 4027871 at support.microsoft.com.

Power adapter

Table 17. Power adapter specifications

Description	Values	
Type	E90W	E130W
Diameter (connector)	4.5 mm x 2.9 mm	4.5 mm x 2.9 mm
Input voltage	100 VAC x 240 VAC	100 VAC x 240 VAC
Input frequency	50 Hz x 60 Hz	50 Hz x 60 Hz
Input current (maximum)	1.5 A	2.5 A
Output current (continuous)	4.62 A	6.7 A

Description	Values	
Rated output voltage	19.5 VDC	19.5 VDC
Temperature range:		
Operating	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)
Storage	40°C to -40°C (104°F to -40°F)	40°C to -40°C (104°F to -40°F)

Battery

Table 18. Battery specifications

Description	Values	
Type	3-cell lithium-ion (56 WHr)	6-cell lithium-ion (97 WHr)
Voltage	11.4 VDC	11.4 VDC
Weight (maximum)	0.25 kg (0.55 lb)	0.37 kg (0.82 lb)
Dimensions:		
Height	223.4 mm (8.8 in.)	330.7 mm (13.02 in.)
Width	72 mm (2.83 in.)	72 mm (2.83 in.)
Depth	7.2 mm (0.28 in.)	7.2 mm (0.28 in.)
Temperature range:		
Operating	0°C to 35°C (32°F to 95°F)	0°C to 35°C (32°F to 95°F)
Storage	35°C to -40°C (95°F to -40°F)	35°C to -40°C (95°F to -40°F)
Operating time	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions.	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions.
Charging time (approximate)	4 hours (when the computer is off) ⓘ **NOTE: Control the charging time, duration, start and end time, and so on using the Dell Power Manager application. For more information on the Dell Power Manager see, *Me and My Dell* on https://www.dell.com/**	4 hours (when the computer is off) ⓘ **NOTE: Control the charging time, duration, start and end time, and so on using the Dell Power Manager application. For more information on the Dell Power Manager see, *Me and My Dell* on https://www.dell.com/**
Life span (approximate)	300 discharge/charge cycles	300 discharge/charge cycles
Coin-cell battery	CR2032	CR2032
Operating time	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions.	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions.

Display

Table 19. Display specifications

Description	Values	
Type	Full High Definition (FHD)	Ultra High Definition (UHD)
Panel technology	WVA (Wide View Angle)	WVA (Wide View Angle)
Luminance (typical)	300 nits	500 nits
Dimensions (Active area):		
Height	350.7 mm (13.81 in.)	350.7 mm (13.81 in.)
Width	205.7 mm (8.1 in.)	205.7 mm (8.1 in.)
Diagonal	394 mm (15.51 in.)	394 mm (15.51 in.)
Native resolution	1920 x 1080 (FHD, non-touch)	3840 x 2160 (UHD, non-touch)
Megapixels	2	8
Color gamut	72% (NTSC)	100% (Adobe)
Pixels per inch (PPI)	141	282
Contrast ratio (min)	600:1	800:1
Response time (max)	35 ms	35 ms
Refresh rate	60 Hz	60 Hz
Horizontal view angle	80/80 +/- degrees	80/80 +/- degrees
Vertical view angle	80/80 +/- degrees	80/80 +/- degrees
Pixel pitch	0.18 mm	0.09 mm
Power consumption (maximum)	6.2 W	10 W
Anti-glare vs glossy finish	Anti-glare	Anti-glare
Touch options	Not supported	Not supported

Fingerprint reader (optional)

Table 20. Fingerprint reader specifications

Description	Values
Sensor technology	Capacitive
Sensor resolution	500 dpi

Description	Values
Sensor area	10.52 x 7.42 mm
Sensor pixel size	N/A

Video

Table 21. Video specifications

Discrete graphics

Controller	External display support	Memory size	Memory Type
NVIDIA GTX N18P-G0	Not supported	4 GB	GDDR5
NVIDIA GTX 1050 N17P-G0-K1	Not supported	3 GB	GDDR5

Table 22. Video specifications

Integrated graphics

Controller	External display support	Memory size	Processor
Intel UHD 630 Graphics	One HDMI 2.0 port	Shared system memory	9th Generation Intel Core i5/i7/i9

Computer environment

Airborne contaminant level: G1 as defined by ISA-S71.04-1985

Table 23. Computer environment

	Operating	Storage
Temperature range	0°C to 40°C (32°F to 104°F)	-40°C to 65°C (-40°F to 149°F)
Relative humidity (maximum)	10% to 90% (non-condensing)	0% to 95% (non-condensing)
Vibration (maximum)*	0.66 GRMS	1.3 GRMS
Shock (maximum)	140 G†	160 G†
Altitude (maximum)	N/A	N/A

* Measured using a random vibration spectrum that simulates user environment.

† Measured using a 2 ms half-sine pulse when the hard drive is in use.

‡ Measured using a 2 ms half-sine pulse when the hard-drive head is in parked position.

Identifier	GUID-A503B40A-1147-4541-8AD2-F481D7B52999
Version	1
Status	Released

Keyboard shortcuts

ⓘ **NOTE: Keyboard characters may differ depending on the keyboard language configuration. Keys used for shortcuts remain the same across all language configurations.**
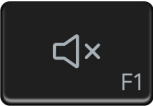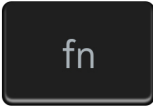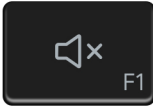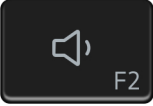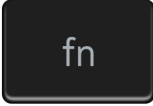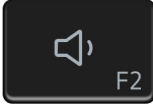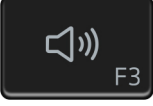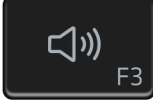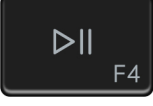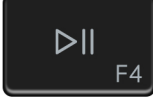
Some keys on your keyboard have two symbols on them. These keys can be used to type alternate characters or to perform secondary functions. The symbol shown on the lower part of the key refers to the character that is typed out when the key is pressed. If you press shift and the key, the symbol shown on the upper part of the key is typed out. For example, if you press **2**, 2 is typed out; if you press **Shift** + **2**, @ is typed out.

The keys F1-F12 at the top row of the keyboard are function keys for multi-media control, as indicated by the icon at the bottom of the key. Press the function key to invoke the task represented by the icon. For example, pressing F1 mutes the audio (refer to the table below).
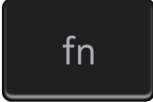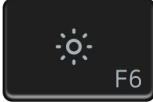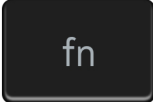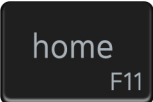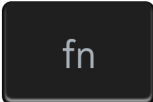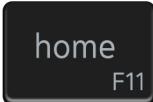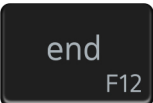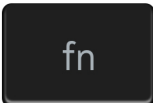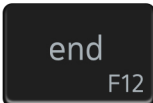
However, if the function keys F1-F12 are needed for specific software applications, multi-media functionality can be disabled by pressing **Fn** + **Esc**. Subsequently, multi-media control can be invoked by pressing **Fn** and the respective function key. For example, mute audio by pressing **Fn** + **F1**.

ⓘ **NOTE: You can also define the primary behavior of the function keys (F1–F12) by changing Function Key Behavior in BIOS setup program.**

Table 24. List of keyboard shortcuts
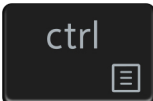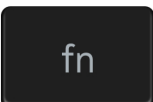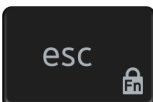
Function key	Redefined key (for multimedia control)	Behavior
⊄× F1	fn + ⊄× F1	Mute audio
⊄› F2	fn + ⊄› F2	Decrease volume
⊄)) F3	fn + ⊄)) F3	Increase volume
▷‖ F4	fn + ▷‖ F4	Play/Pause
☼ F5	fn + ☼ F5	Toggle keyboard backlight (optional) ⓘ **NOTE: Non-backlight keyboards have F5 function key without the backlight icon and does not support toggle keyboard backlight function.**

Function key	Redefined key (for multimedia control)		Behavior
F6 (brightness)	fn	+ F6 (brightness)	Decrease brightness
F7 (brightness)	fn	+ F7 (brightness)	Increase brightness
F8 (display)	fn	+ F8 (display)	Switch to external display
prt sc F10	fn	+ prt sc F10	Print screen
home F11	fn	+ home F11	Home
end F12	fn	+ end F12	End

The **Fn** key is also used with selected keys on the keyboard to invoke other secondary functions.

Table 25. List of keyboard shortcuts

Function key	Behavior
fn + B	Pause/Break
fn + S	Toggle scroll lock
fn + R	System request
fn + ctrl	Open application menu
fn + esc	Toggle Fn-key lock

Identifier	GUID-79104453-0F4A-4408-A5D4-44ABDDD02CAE
Version	7
Status	Released

Getting help and contacting Dell

Self-help resources

You can get information and help on Dell products and services using these self-help resources:

Table 26. Self-help resources

Self-help resources	Resource location
Information about Dell products and services	www.dell.com
My Dell	
Tips	
Contact Support	In Windows search, type `Contact Support`, and press Enter.
Online help for operating system	www.dell.com/support/windows www.dell.com/support/linux
Troubleshooting information, user manuals, set up instructions, product specifications, technical help blogs, drivers, software updates, and so on.	www.dell.com/support
Dell knowledge base articles for a variety of computer concerns	1. Go to www.dell.com/support. 2. On the menu bar at the top of the Support page, select **Support** > **Knowledge Base**. 3. In the Search field on the Knowledge Base page, type the keyword, topic, or model number, and then click or tap the search icon to view the related articles.
Learn and know the following information about your product: • Product specifications • Operating system • Setting up and using your product • Data backup • Troubleshooting and diagnostics • Factory and system restore • BIOS information	See *Me and My Dell* at www.dell.com/support/manuals. To locate the *Me and My Dell* relevant to your product, identify your product through one of the following: • Select **Detect Product**. • Locate your product through the drop-down menu under **View Products**. • Enter the **Service Tag number** or **Product ID** in the search bar.

Contacting Dell

To contact Dell for sales, technical support, or customer service issues, see www.dell.com/contactdell.

ⓘ **NOTE: Availability varies by country/region and product, and some services may not be available in your country/region.**

ⓘ **NOTE: If you do not have an active Internet connection, you can find contact information about your purchase invoice, packing slip, bill, or Dell product catalog.**